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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/652,713

08/31/2000

Trung T. Doan

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01/19/2007

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EXAMINER

MACARTHUR, SYLVIA

ART UNIT

PAPER NUMBER

1763

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/652,713

Applicant(s)

DOAN, TRUNG T.

Examiner

Sylvia R. MacArthur

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/7/2006 have been fully considered but they are not persuasive. Namely, applicant argues that the prior art of Tzeng et al (US 5,756,155) fails to teach capturing fluid that this directed at the substrate. This is a matter of intended use. Tzeng et al teaches a nozzle that dispenses a fluid onto the edge of a wafer, see col. 5 lines 50-55. A vacuum is then used to suction the fluid, note that the nozzle is near the wafer edge during the vacuum process and thus inherently with suction liquid within the vicinity, be it on the nozzle and/or the wafer edge.

Applicant further argues that the apparatus of Sukenari does not disclose or suggest a vacuum source. Upon further review of the claims of the present invention, it is noted that a vacuum source is not positively recited in the claims. Nevertheless, Sukenari teaches an evacuation/exhaust nozzle 13 in the English Translation of the abstract and on [0021]. It is the examiner's position that the recitation of an evacuation nozzle or exhaust nozzle inherently teaches a vacuum in order for evacuation or exhausting to occur.

Note that the claims of the present invention are to an apparatus which comprises a dispensing nozzle releasing a chemical toward an edge bead and a splash controller that is concentrically positioned at least partially around the dispenser and physically unattached from the edge bead. The nature of a means provided to generate suction, exhaust or vacuum all inherently generate a gas pressure around the edge bead that is lower than an ambient gas pressure.

Regarding claim 40, applicant argues against an alleged examiner's "Official Notice". However, the examiner did not make the obviousness rejection based on a taking on an Official Notice. The obviousness rejection was based on the teachings of the structure of the nozzles of both Tzeng and Sukenori, both teach a dispenser and splash controller that treats one side of the wafer and it is a matter of obviousness to duplicate this structure so that treatment of the wafer can be provided on both sides using the same structure of nozzles of both Tzeng and Sukenori. Such a conclusion is supported by *In re Harza*, see MPEP 2144.04.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 36-39 and 41-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Tzeng et al (US 5,756,155).

The prior art of Tzeng et al teaches a combination nozzle and a vacuum hood.

Regarding claims 36, 37, and 41: The device comprises a dispenser (inclusive of elements 22 and path 11 and outlet 16) and splash controller (vacuum port inclusive of element 15, 18) see Figs. 2-5. Fig. 4 especially features two concentric nozzles and col.5 lines 5-16. The nozzle is configured to treat the periphery of the wafer according to col. 5 lines 50-65.

Regarding claim 38: The vacuum nozzle completely surrounds the dispenser according to Fig.

4.

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Regarding claim 39: See Figs. 2-5.

Regarding the limitation in claims 36 and 41 that the splash controller generate a gas pressure around the edge that is lower than ambient gas pressure this limitation is inherently perform as a vacuum is provided.

Regarding claims 42 and 43: The side that the dispenser releases the chemical to is interpreted as a matter of an intended use and is dependent upon the orientation of the wafer. The apparatus of Tzeng et al is inherently capable of releasing chemical to the first or second side of the wafer. Furthermore, the inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims. In re Young, 75 F. 2d 966, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 312 F. 2d 937, 136 USPQ 458, 459 (CCPA 1963)).

Regarding claims 44 and 45: The type of fluid released by the nozzle is a matter of intended use. The dispenser of Tzeng et al is inherently capable of releasing the materials recited in claims 44 and 45 as the type of material dispensed does not structurally limit the claim. An apparatus is what it is and not what it does, Ex Parte Masham, 2 UPSQ2d 1647 (Bd. App. & Inter. 1987).

4. Claims 36-39 and 41-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Sukenari (JP 08-017708).

Using the English Translation of the patent, it is noted that the prior art of Sukenari teaches a dual nozzle to remove a film from the periphery of the wafer, see the abstract.

Regarding claims 36, 37, and 41: The device comprises a dispenser (including 14 and 16) and splash controller (including 17 and 15) see the picture on the English Abstract. Note the nozzles are concentric. The nozzle is configured to treat the periphery of the wafer according to the abstract.

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Regarding claim 38: The vacuum nozzle completely surrounds the dispenser according to the figure

Regarding claim 39: See the figure.

Regarding the limitation in claims 36 and 41 that the splash controller generate a gas pressure around the edge that is lower than ambient gas pressure this limitation is inherently perform as a vacuum is provided.

Regarding claims 42 and 43: The side that the dispenser releases the chemical to is interpreted as a matter of an intended use and is dependent upon the orientation of the wafer. The apparatus of Sukenari is inherently capable of releasing chemical to the first or second side of the wafer. Furthermore, the inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims. In re Young, 75 F. 2d 966, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 312 F. 2d 937, 136 USPQ 458, 459 (CCPA 1963)).

Regarding claims 44 and 45: The type of fluid released is a matter of intended use. The dispenser of Sukenari is inherently capable of releasing the materials recited in claims 44 and 45 as the type of material dispensed does not structurally limit the claim. An apparatus is what it is and not what it does, Ex Parte Masham, 2 UPSQ2d 1647 (Bd. App. & Inter. 1987).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

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skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tzeng et al or Sukenari.

The teachings of Tzeng et al or Sukenari were discussed above.

Tzeng et al or Sukenari fails to teach a second nozzle to treat the underside of the wafer. In this case, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to provide a nozzle as taught by Tzeng et al or Sukenari to treat both sides of the wafer and integrate these nozzles to simplify the apparatus. Such design allows for treatment of both sides of the wafer simultaneously. The stance that it is obvious to duplicate the parts of the apparatus of Tzeng et al or Sukenari is supported by *In re Harza* 274 F.2d 669, 124 USPQ 378 (CCPA 1960), see MPEP 2144.04. Making the duplicate nozzles wherein one treats the top of the wafer and the other treats the bottom of the wafer integral is also an obvious matter of design according to *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965). Thus, it would have been obvious at the time of the claimed invention to provide the apparatus of Tzeng et al or Sukenari with a duplicate of the taught nozzle wherein both sides of the wafer are treated.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

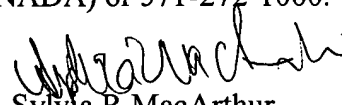
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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R. MacArthur whose telephone number is 571-272-1438. The examiner can normally be reached on M-F during the hours of 8:30 a.m. and 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Sylvia R MacArthur
Patent Examiner
Art Unit 1763

January 17, 2007